Reference: FORMATION RELEASE REQUEST WHC-CM-3-4 ID Number (include revision, volume, etc.) Purposa Speech or Presentation ☐ Reference Technical Report Tull Paper (Chack all Types of Release Thesis or Dissertation List attachments. 1445 Summary 6-364: 9 LOG only one ZNO QUARTER OF 92. DISCREPANLY Manual LEAK DETECTION PIT LOS Abstract suffix) REPORT TESA - 91-414 DATER 11-1-91 PAGE SHOWING SCHEMATIC OF 10134 LEAR DETECTION PIT (LDP) LDP TRANSFER DATA SHEET Brochure/Flier ☐ Visual Aid Software/Database Speakers Bureau
Poster Session DPS PROCEDUILE H-2- 37787 Controlled Document 70-020-545 Date Release Required Other Ecology (EDAN) Title Unclassified Category Impact UC-Lavel DATA REQUESTED BY ELDLOGY CONCERNING 10154 1438, OF 7-15-92 Complete for ☑ No ☐ Yes information received from others in confidence, such as proprietary data, trade New or novel (patentable) subject matter? if "Yes", has disclosure been submitted by WHC or other secrets, and/or inventions? No Yes (Identify) company? ☐ No ☐ Yes Disclosure No(s). Copyrights? No ☐ Yes Trademarks? ☑ No ☐ Yes (Identify) If "Yes", has written permission been granted? ☐ No ☐ Yes (Attach Permission) Group or Society Sponsoring Title of Conference or Meeting City/State Date(s) of Conference or Meeting □ No Will proceedings be published? ☐ Yes ☐ No Will material be handed out? ☐ Yes Title of Journal **CHECKLIST FOR SIGNATORIES** Reviewer - Signature Indicates Approval Review Required per WHC-CM-3-4 Yes <u>No.</u> Date Signature Name (printed) Classification/Unclassified Controlled Nuclear Information 図 Williamsm Patent-General Counsei 团 Legal-General Counsel \mathbf{X} Applied Technology/Export Controlled Information or international Program 図 OITBERLIN WHC Program/Project M Communications \boxtimes RL Program/Project \square Publications Services 図 Other Program/Project \square Information conforms to all applicable requirements. The above information is certified to be correct. INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP Yes References Available to Intended Stamp is required before release. Release is contingent upon resolution of Audience mendatory comments. Transmit to DOE-HQ/Office of Scientific and Technical Information 図 Author/Requestor (Printed/Signature) Date STEVE SZENDRE Intended Audience External Internal [☐ Sponsor (Printed/Signature) Rasponsible M Date Cancelled Date Disapproved BD-7600-062 (08/91)

Part 1

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per Process Mino;

LEAK DETECTION PIT TRANSFER OSR DATA SHEET

Date 6-3-92

Leak Detection Pit Number 241-St 010

Transfer to Tank 102 CF

SAR-006/OSR 11.4.2.2 SAR-010/0SR 11.13

SAR-016/OSR 11.5

Routing is in place and transfer may be started.

Supervision Signature Sleen & Hall Date 6-3-42

Leak Detection Pit Levels

Starting Liquid Level (or WF) 40 WF

Ending Liquid Level (or WF) 10 WF

Inches Transferred 20 WF

Background Reading ________ /00 ___ cpm

Sample Number (If required) //4

SAR-010/OSR 11.14 (AY or AZ only)

Sample Reading $\angle D$

Supervision Signature Solven The Date 6-8-97

Operator Signature / Phness Date 6-8-92

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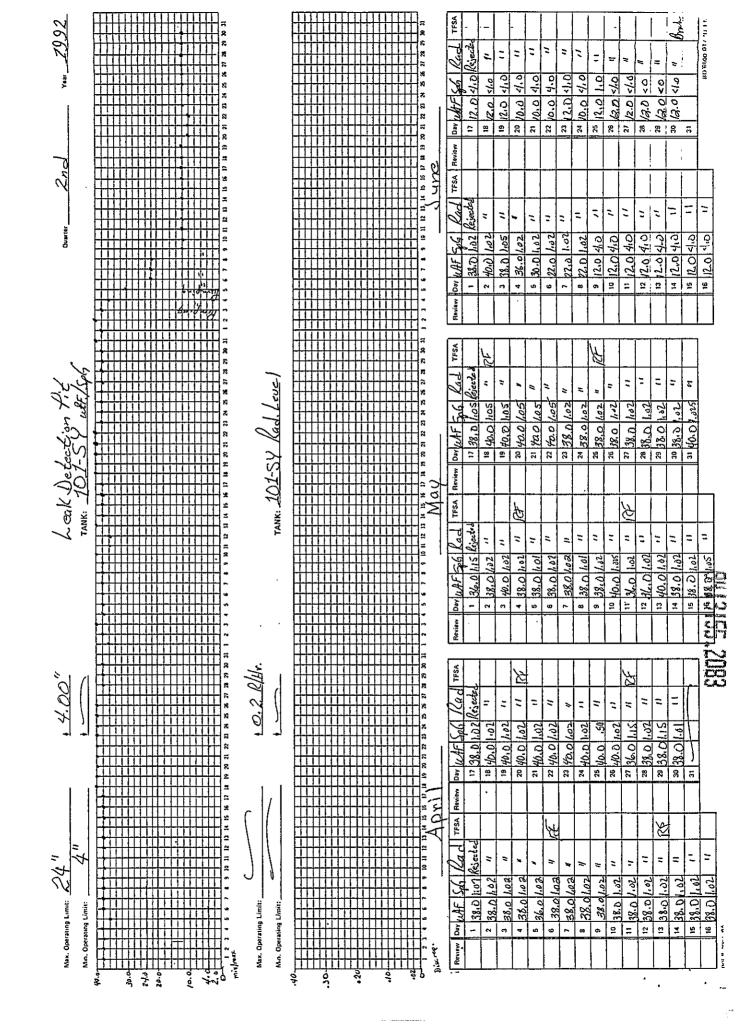
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LEAK DETECTION PIT TRANSFER OSR DATA SHEET

Date 6-5-92 Leak Detection Pit Number 241-54-02C Transfer to Tank 102-SY SAR-006/OSR 11.4.2.2 SAR-010/0SR 11.13 SAR-016/0SR 11.5 Routing is in place and transfer may be started. Supervision Signature ____ Date 6-5-92 Leak Detection Pit Levels Starting Liquid Level (or WF) 45 wF Inches Transferred _____29" Background Reading ______cpm Sample Number (If required) //A SAR-010/OSR 11.14 (AY or AZ only) Sample Reading Supervision Signature Operator Signature fra 7 Emus Date 6-8-92 Rev/Mod Document No. T0-020~595 A-3 10

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LEAK DETECTION PIT TRANSFER OSR DATA SHEET

Date 6-3-92	
Leak Detection Pit Number 241-St OIC	
Transfer to Tank 102 SF	
SAR-005/OSR 11.4.2.2 SAR-010/OSR 11.13 SAR-016/OSR 11.5	
Routing is in place and transfer may be started.	
Supervision Signature Shiri 2 Hall Date 6-3-42	
Leak Detection Pit Levels	
Starting Liquid Level (or WF) 40 WF	
Ending Liquid Level (or WF) 10 WF	
Inches Transferred 30 WF	
Background Reading	
Sample Number (If required)	·
SAR-010/OSR 11.14 (AY or AZ only)	
Sample Reading $\angle D$ cpm	
Supervision Signature Samo Abell Date 6-8-97	
Operator Signature / Fines Date 6-8-92	
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LEAK DETECTION PIT TRANSFER OSR DATA SHEET

Date 6-5-92
Leak Detection Pit Number 241-54-02C
Transfer to Tank 102-SY
SAR-006/OSR 11.4.2.2 SAR-010/OSR 11.13 SAR-016/OSR 11.5
Routing is in place and transfer may be started.
Supervision Signature MWAG Date 6-5-92
Leak Detection Pit Levels
Starting Liquid Level (or WF) 45 wF
Ending Liquid Level (or WF) 16 WF
Inches Transferred 29"
Background Readingcpm
Sample Number (If required) <u>NA</u>
SAR-010/OSR 11.14 (AY or AZ only)
Sample Reading <pre></pre>
Supervision Signature Sign
Operator Signature Han 7 Emer Date 6-8-92
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TANK FARM	Operation
GENERAL	System

TRANSFERS

I. SYSTEM DESCRIPTION

This procedure provides instruction for making an intra-farm transfer from a Leak Detection Pit to an adjacent tank.

II. PRESTART CONDITION

None

III. SAFETY

Warning - High dose rates and contamination are possible during sampling activities.

OPERATIONAL SAFETY REQUIREMENTS (SD-WM-SAR-006)

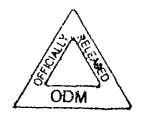
OSR 11.4.2.2 WASTE TRANSFERS TO INTERIM ISOLATED FACILITIES

Requirement

No waste shall be transferred to an interim isolated facility. No nozzle seal shall be removed which provides a connection from an active facility to an interim isolated facility.

Recovery

If the transfer requirement is violated, the transfer shall be halted immediately at the source. If the nozzle seal requirement is violated, the seal shall be replaced as soon as possible consistent with good radiological practice. The shift manager shall notify the managers of TFS&O and TF&EPE. All transfers in the vicinity of the interim isolated facility shall be halted until a recovery plan is in place. The managers of TFS&O and TF&EPE shall establish a recovery plan to ensure that the facility is again isolated, and to evaluate the probable effects if a transfer has occurred.



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11-1-90

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III. <u>SAFETY</u> (Cont.)

OPERATIONAL SAFETY REQUIREMENTS (SD-HS-SAR-010)

OSR 11.8 WASTE TRANSFER SYSTEM LEAK DETECTION

Requirement

Limiting Condition for Operation (LCO): Transfer system leak detectors shall be verified as operable (not failed) before a transfer is initiated, or applicable diversion boxes/catchtanks shall be constantly surveyed with portable conductivity probes during the transfer.

Recovery

If the LCO requirement is exceeded, the manager of TFS&O, WMPE, and WMHP shall be notified. Transfers shall be terminated if leak detection capability cannot be provided or is lost. Recovery action may include the use of temporary leak detection devices. Restoration of a permanent leak detector shall be completed on a priority basis. If a surveillance requirement is exceeded actions defined in section 11.2.6.3 shall be taken.

OSR 11.13 MAXIMUM LIQUID LEVEL

Requirement

The maximum liquid of froth level in 241-AY and AZ Tanks shall be less than 370 in.

Recovery

If this requirement is violated, the shift manager shall immediately notify the managers of Tank Farm Processing and TF&EPC. The tank shall be restored to compliance with the requirement. Radiation Monitoring shall survey the tank farm to determine whether any new radiological conditions are present that must be addressed.

OSR 11.14 CHEMICAL COMPOSITION

Requirement

The composition of waste stored in aging-waste tanks shall be controlled to achieve the most favorable corrosion rates possible in order to maximize tank life. A spare aging-waste tank shall be maintained for use in the event of premature failure of an operating tank.

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III. <u>SAFETY</u> (Cont.)

Recovery

If this requirement is violated, transfer of waste solution to aging-waste tanks shall cease or be curtailed as appropriate. The shift manager shall immediately notify the managers of Tank Farm Services and TF&EPC. A recovery plan shall be prepared and formally approved by management, and a reevaluation of tank service life shall be made.

OPERATIONAL SAFETY REQUIREMENTS (SD-WM-SAR-016)

OSR 11.5 PRIMARY TANK MINIMUM LIQUID LEVEL

Requirement

Limiting Condition of Operation (LCO): The ventilation system shall not be operated unless the liquid level is 6 in. (241-SY, AN, AW and AP Tanks).

Recovery

If the LCO requirement is violated, the shift manager shall contact the managers of TFS&O and TF&EPC. Recovery actions include addition of water or waste and/or manipulation of the primary exhaust system. If a surveillance requirement is violated, actions defined in section 11.2.6.3 shall be taken.

OPERATIONAL SAFETY REQUIREMENTS (SD-WM-SAR-016)

OSR 11.7 WASTE TRANSFER SYSTEM LEAK DETECTION

Requirement

Limiting Condition for Operation (LCO): Transfer system leak detectors shall be verified as operable (not failed) before a transfer is initiated, or applicable diversion boxes/catch tanks shall be constantly surveyed with portable conductivity probes during the transfer.

Recovery

If the LCO is violated the manager of TFS&O, TF&EPE and S&QA shall be notified. Transfers shall be terminated if leak detection capability cannot be provided and shall be terminated if lost. Recovery action may include the use of temporary leak detection devices. Restoration of a permanent leak detector shall be completed on a priority basis. If a surveillance requirement is violated, actions defined in section 11.2.6.3 shall be taken.

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III. SAFETY (Cont.)

Applicable Safety Documents - Provisions of Radiation Protection Manual, WHC-CM-4-10; Radiation Work Requirements and Permits Manual, WHC-CM-4-15, Vol. 2; Industrial Safety Manual, WHC-CM-4-3, Vols 1-3; Building Emergency Plan, WHC-IP-0263; and Tank Farm Safety Rules apply to all work performed under this procedure.

IV. TOOLS AND SUPPLIES

Pump Water Hose Paper Plastic Plastic Sleeving Plastic Bags Tape Knives Masks Contamination Containers Data Sheet SOP TO-020-240, Water Addition to Leak Detection Pits SOP TO-020-270. Equipment Removal or Installation at Diversion Boxes and Pits SD-WM-SAR-006. SINGLE SHELL TANK ISOLATION SD-HS-SAR-010. AGING WASTE SD-WM-SAR-016, DOUBLE SHELL TANK FARM FACILITY OSD-T-151-00007. OPERATION SPECIFICATIONS FOR 241-AN, AP, AW, AY, AZ AND SY OPERATING SPECIFICATIONS FOR SINGLE SHELL WASTE OSD-T-151-00013. STORAGE TANKS OPERATING SPECIFICATIONS FOR AGING WASTE OPERATIONS OSD-T-151-00017.

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VI. PROCEDURE

- A. PUMP LEAK DETECTION PITS EXCEPT 101-AZ
 - NOTE All overground pumping is to be directed by Tank Farm Operations supervision, who will verify by visual inspection that the routing and equipment is in place prior to start of transfer.
 - If cover block removal is required, remove per TO-020-270, EQUIPMENT REMOVAL OR INSTALLATION AT DIVERSION BOXES AND PITS.
 - 1. Contact Tank Farm Plant Engineering (TFPE) to select a receiver tank and record tank number on data sheet.
 - 2. Take a dip sample from leak detection pit and have HPT survey sample. Record, on data sheet, the reading on the sample, background reading and starting liquid level.

<u>Hold Point</u>: If the HPT determines that the sample may be contaminated, an "LK PIT" laboratory analysis must be performed on the sample before proceeding. If the sample and background are identical, continue.

WARNING

HEALTH PHYSICS TECHNICIAN (HPT) SURVEILLANCE IS REQUIRED DURING INSTALLATION AND REMOVAL OF PUMP AND HOSE. PUMP AND HOSE MAY BE CONTAMINATED.

3. Have HPT survey pump and hoses to be used in the transfer.

<u>Hold Point</u>: If the HPT determines that either the hose or pump is contaminated, the equipment will not be used in an uncontaminated pump pit.

- 4. Install pump in leak detection pump pit.
- 5. Run pumpout hose between pump and riser of receiver tank.
 All pipe joints and connector heads of the overground line shall be wrapped with plastic and ends securely taped to prevent moisture from entering or leaving assembly. Prepare discharge end of hose to prevent contamination of hose from tank riser.

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- A. PUMP LEAK DETECTION PITS EXCEPT 101-AZ (Cont.)
 - Remove riser cover on primary tank and insert hose. Wrap plastic around hose, riser flange and hose connection joints.
 - 7. Refer to TABLE 1 to determine amount of liquid to be transferred.
 - NOTE The minimum and maximum Weight Factor (WF) instrument readings allowable for normal operation is listed in the "Min. Limit" and "Max. Limit" columns of TABLE 1 for each leak detection pit. Water should be added if readings are below the "Min" figure. Water should be removed if readings exceed the "Max" figure.
 - 8. Start pump and transfer contents of leak detection pit to tank.
 - 9. When the pump has been started, walk the transfer line to check for leaks.

WARNING

HEALTH PHYSICS TECHNICIAN (HPT) SURVEILLANCE IS REQUIRED DURING INSTALLATION AND REMOVAL OF HOSE. HOSE MAY BE CONTAMINATED.

- 10. When transfer is complete, remove hose from tank riser. Replace riser cover and request HPT to survey hose for contamination.
- 11. Record final liquid level of leak detection pit on DATA SHEET.
- 12. Remove pump and hose from area.

TABLE 1

LEAK DETECTION PIT	TYPE	RANGE	READING	MIN.	MAX. LIMIT
101-AX	Dial	0-30	Direct	4	17
102-AX	Dial	0-30	Direct	0	17
103-AX	Dial	0-30	Direct	4	17
104-AX	Dial	0-30	Direct	4	17
101-A-AY	Dial	0-50	Mult. by 2	4	20
101-B-AY	Dial	0-50	Mult. by 2	4	20
102-AY	Dial	0-50	Mult. by 2	4	20
101-AZ	Dial	0-50	Mult. by 2	4	28
102-AZ	Dial	0-50	Mult. by 2	4	28
101/102-AZ	Dial	0-50	Mult. by 4	4	28
01C-AW	Dial	0-100	Direct	12	36
02C-AW	Dial	0-100	Direct	12	36
03C-AW	Dial	0-100	Direct	12	36
04C-AW	Dial	0-100	Direct	12	36
05C-AW	Dial	0-100	Direct	12	36
06C-AW	Dial	0-100	Direct	12	36
01C-AN	Dial	0-100	Direct	12	36
02C-AN	Dial	0-100	Direct	12	36
03C-AN	Dial	0-100	Direct	12	36
04C-AN	Dial	0-100	Direct	12	36
05C-AN	Dial	0-100	Direct	12	36
06C-AN	Dial	0-100	Direct	12	36
07C-AN	Dial	0-100	Direct	12	36
01C-SY	Dial	0-50	Mult. by 4	4	24
02C-SY	Dial	0-50	Mult. by 4	4	24
3C-SY	Dial	0-50	Mult. by 4	4	24
03C-AP	Guage	0-130	Direct	· 12	36
05C-AP	Guage	0-130	Direct	12	36

^{*} Any changes to the WF limits must be reflected in WHC-SD-WM-TI-357.

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B. PUMP 101-AZ LEAK DETECTION PIT

- NOTE The transfer route for pumping the 101-AZ leak detection pit is through the floor drain to the 101-AZ tank.
- 1. Request crane crew to remove 101-AZ leak detection pit cover.
- 2. Take a dip sample from leak detection pit and have HPT survey sample. Record, on DATA SHEET, the reading on the sample, background reading and starting liquid level.

<u>Hold Point</u>: If the HPT determines that the sample may be contaminated, an "LK PIT" laboratory analysis must be performed on the sample before proceeding. If the sample and background are identical, continue.

- 3. Request crane crew to reinstall cover block.
- 4. Verify that a power cable is not connected to the 101-AZ transfer pump control station (located north of OIC pit) and that 101-AZ transfer pump circuit breaker P-101 (Pit OIC), located in AZ-801 instrument bldg., is OFF.
- 5. Lift and turn 101-AZ Leak Detection Pit drain 90 degrees with bail hook.
- 6. Request electrician to connect 101-AZ leak detection pit pump power cable to 101-AZ transfer pump control station power outlet (just north of the 101-AZ 01C Sluice Pit).

CAUTION

Transfer pump power cable must exit the transfer pump pit near the pump control station. If the transfer pump power cable and connector are not visible do not proceed until the pump status is verified with Double-Shell Tank Process Engineering.

- 7. Verify transfer pump power cable exits transfer pump pit near the pump control station.
- 8. Switch the P-101 (Pit 01C) circuit breaker ON located in the AZ-801 instrument building.
- 9. Record the starting weight factor on DATA SHEET.

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B. Pumping 101-AZ Leak Detection Pit (Cont.)

- 10. Push START button on 101-AZ Transfer Pump Control Station to begin pumping.
- 11. When the transfer is complete, push STOP button on 101-AZ Transfer Pump Control Station to shut pump off.
- 12. Switch P-101 (Pit 01C) circuit breaker Off.
- 13. Record final weight factor on DATA SHEET.
- 14. Have electrician disconnect leak detection pit pump power cable from pump control station. Wind up power cable and place near 101-AZ Leak Detection Pit.
- 15. Turn drain with bail hook until drain drops into place.
- 16. Send DATA SHEET to TFPE via 272-AW supervision.

LEAK DETECTION PIT TRANSFER OSR DATA SHEET

Date			•	
Leak Detection Pit Nu	mber			
Transfer to Tank				
SAR-006/OSR 11.4 SAR-010/OSR 11.1 SAR-016/OSR 11.5	3		•	
Routing is in place a	nd transfer may	be start	ed.	
Supervision Signature			Date_	
Leak Detection Pit Le				
Starting Liquid	Level (or WF)			
Ending Liquid Le	vel (or WF)			
Inches Transferred			*	.* .
Background Reading		cpm		<
Sample Number (If req	uired)			
SAR-010/0SR 11.14 (AY	or AZ only)		•	
Sample Reading		срт	•	
Supervision Signature			Date _	
Operator Signature			Date	
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BD-6400-083,2 (R-5-82)

Tank Farm Surveillance Analysis and Support DISCREPANCY REPORT

To: L. E. EYRE MANAGER, WEST TFO MSIN: T4-01

Date of Discrepancy:

November 01, 1991

Report No.:

TFSA-91-414

Description of Discrepancy

The following Leak Detection Pit (LDP) radiation data sheet readings have been recorded with the term "rejected". No radiation reading has been recorded since 10/23/91.

101-SY (LDP) 10/23/91

This is a daily requirement.

INSTRUCTIONS:

- Response requested by November 18, 1991
- Provide a diagnosis and corrective action for each item above, specifying:
 - (A) Immediate actions taken to correct the discrepancy or failure, and maintain readings within WHC-SD-WM-TI-357 limits.
 - (B) Actions that will be taken to prevent recurrence.
 - (C) Planned completion date for corrective actions.

Prepared by:

R. R. RIOS (LAN)

Approved by:

I hater

Date:

11-6-91

CORRECTIVE ACTION STATEMENT

Diagnosis and Corrective Action

Work request 2W-91-0016W issued for repair of leak detection pit recorder. Work is in progress. Unit has a failed power supply waiting for replacement part to complete repairs.

Corrective Action Statement Prepared by Discrepancy Report Closed by TFSA Engineer WL Parnell S5-12 Distribution: DG Hamrick R1-62 JJ Badden S5-15 R1-80 JP Harris III RR Rios R1-51 GTFrater R1-51 File RW Jacobson S5-01 SD Godfrey R1-51

